

Airport Disability Compliance

Accessible Aircraft Boarding Equipment and Service Overview

Office Of Civil Rights

*ACHIEVING SAFETY
THROUGH DIVERSITY*

Presented to: 2020 NCRTC Participants

Date: August 4, 2020

Office Of Civil Rights

*ACHIEVING SAFETY
THROUGH DIVERSITY*



**Federal Aviation
Administration**

Authorities



- Authorities for provision of accessible boarding equipment, including lifts, ramps, passenger boarding bridges (PBB), also known as jet bridges
 - Air Carrier Access Act (ACAA) of 1986
 - ACAA regulations at 14 Code of Federal Regulations (CFR) Part 382
 - Section 504 of the Rehabilitation Act (Sec. 504) of 1973
 - Sec. 504 regulations at 49 CFR Part 27
 - Advisory Circular (AC) 150/5220-21C (Aircraft Boarding Equipment)
 - 2010 Americans with Disabilities Act Standards for Accessible Design (ADAAS)

Enforcement

ACAA, 14 CFR Part 382

- No U.S. or Foreign air carrier may discriminate against any otherwise qualified individual with a disability.
- Enforced by the U.S. Dept. of Transportation (DOT) Assistant General Counsel for Aviation Enforcement and Proceedings – not FAA.
- Covers aircraft accessibility, airport facilities controlled by air carriers, and air carrier services.
- Air carriers and airport operators should identify respective responsibilities in contracts or leases.

Enforcement continued

49 CFR Sec. 27.72

- Applies to recipient airport programs with 10,000 or more annual enplanements.
- Requires airport operators to work with air carriers to provide boarding assistance to individuals with disabilities using mechanical lifts, ramps and other devices.
- Requires written agreements.
 - Airport operators must negotiate in good faith with air carriers to assign responsibility for meeting the boarding assistance requirements.
 - Agreements should identify who (air carrier, airport, etc.) must acquire and who owns equipment, including emergency evacuation equipment.
 - Agreements must ensure and assign responsibility so that all lifts and other accessibility equipment are maintained in proper working condition.
 - Often incorporated into air carrier terminal leases.

Enforcement continued

Training

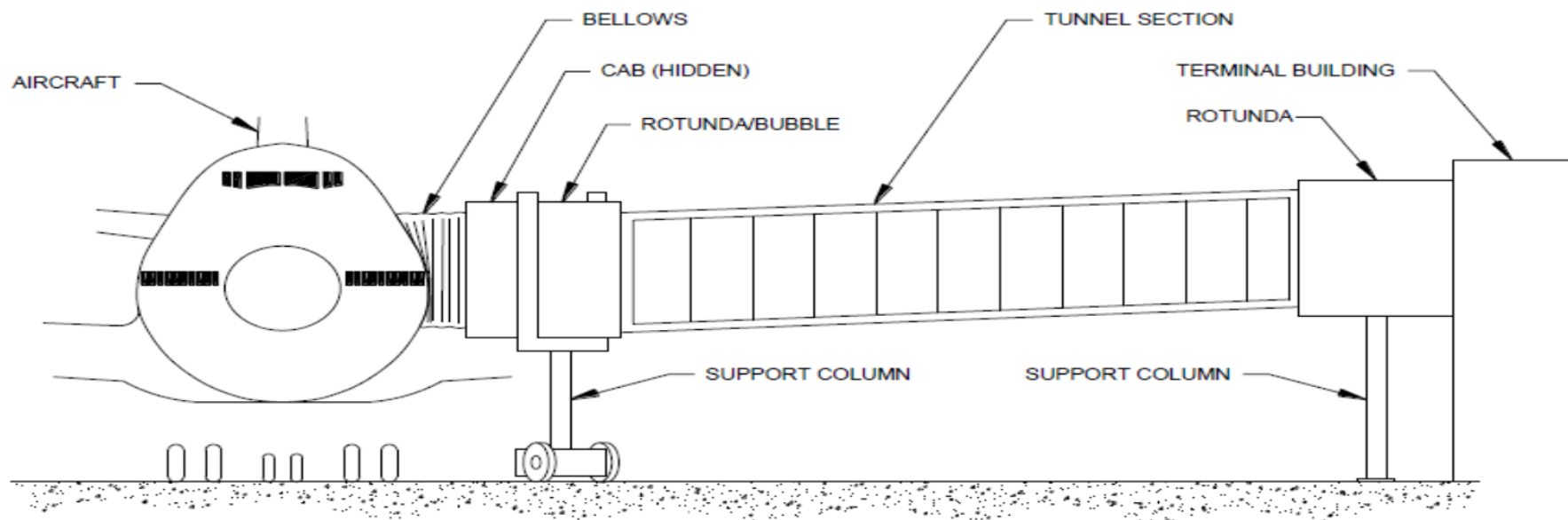
- Responsible personnel must be trained to proficiency in using airport boarding assistance equipment and be knowledgeable of boarding assistance procedures that safeguard the safety and dignity of passengers with disabilities.



PBB Requirements

AC 150/5220-21C (Aircraft Boarding Equipment)

- Equipment meeting the specifications provided in AC 150/5220-21C satisfies the boarding device requirements contained in 49 CFR Sec. 27.72, and 14 CFR Sec. 382.91-382.105.
- A standard PBB contains three main sections:
 - Rotunda assembly, support column, and tunnel sections/corridor, and the rotunda on the aircraft entrance end of the PBB will also be referred to as the “bubble”.



PBB Requirements continued

Flooring

- Firm, stable, slip-resistant, level, hard surface with medium-high friction, for example:
 - Low pile carpet (with maximum height of 0.50 in (13 mm))
 - Medium to high friction vinyl flooring
- Carpet or carpet tile shall be securely attached and have a firm or no cushion / pad
- Consider weather in order to avoid wet slippery surfaces.
- The goal is a surface that works for persons using wheelchairs or with limited mobility.

Minimum Interior Clear Floor Dimensions

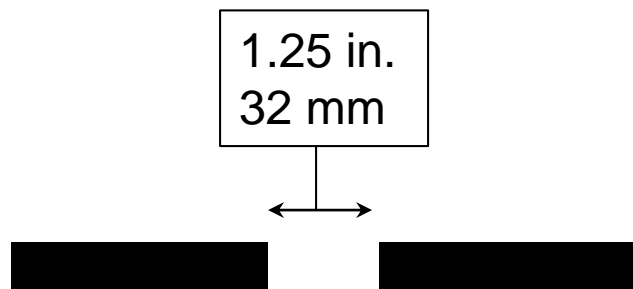
- Floor width – 58 inches
- Corridor width – 50 inches or as limited by the rotation of the PBB
- Telescoping tunnel transition ramp width – 56 inches
- Corridor height – 80 inches



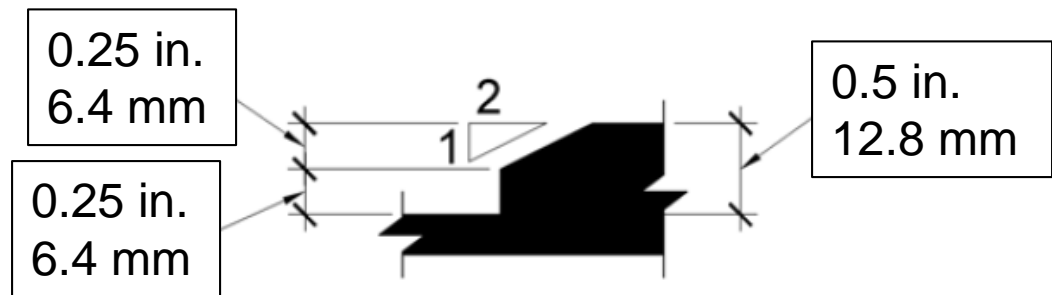
PBB Requirements continued

Gaps and Changes in Levels

- Horizontal maximum gap up to 1.25 in. (32 mm). 2010 ADAAS Sec. 410.4.
- Vertical changes in level are permitted up to 0.25 in. (6.40 mm), and up to an additional 0.25 in. (6.40 mm) if beveled. 2010 ADAAS Sec. 303.
- Vertical changes greater than 0.50 in. (13 mm) require a ramp.



Horizontal Gap



Vertical Gap

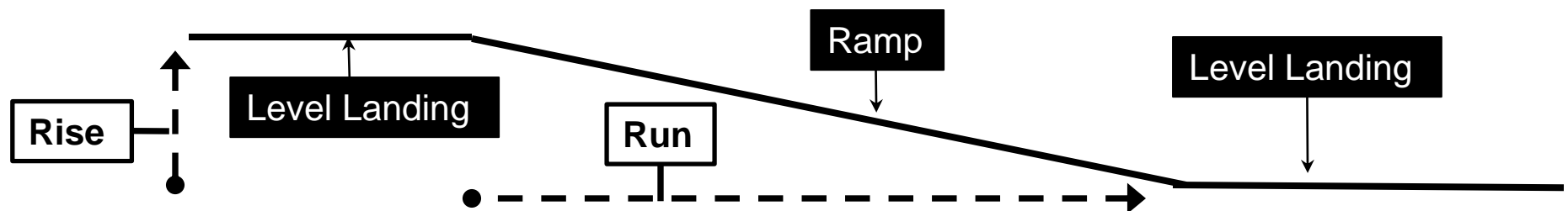
PBB Requirements continued

Maximum PBB Ramp Slope

- Measured in **[rise]:[run]**
- Unassisted = **1:12** (4.76 degrees)
- Unassisted and less than 5 ft. horizontal distance = **1:8** (7.13 degrees)
- Assisted = **1:4** (14 degrees)

Level Landing

- Required at ends of ramps
- Clear level areas are essential for safe transfer for aisle chairs
- No maximum rise / requirements for intermediate landing areas for aircraft boarding equipment, unlike other facilities. Compare 2010 ADAAS 405.7 (landings every 30 in.).



PBB Requirements continued

Threshold Protection

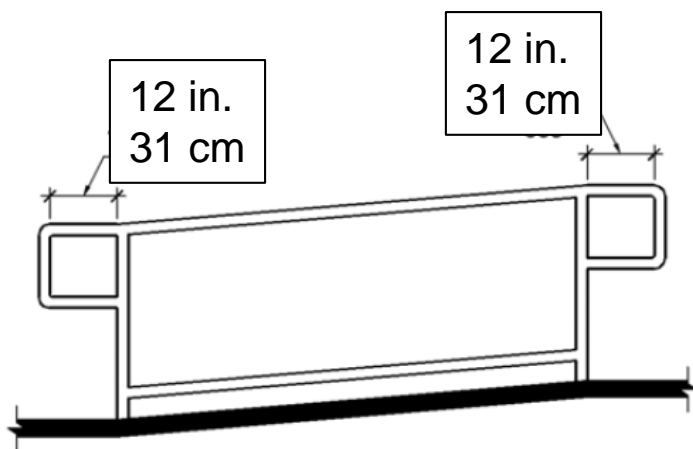
- Must be provided on all boarding paths that are above 0.25 in (6.4 mm) ground level to prevent wheelchair casters and crutch tips from slipping off the edge of the path surface.
 - Fully enclosed pathway: the sides of the enclosure serve as edge protection.
 - Ramps or lifts that are not enclosed: edge protection and handrails required.



PBB Requirements continued

Ramp Transitions

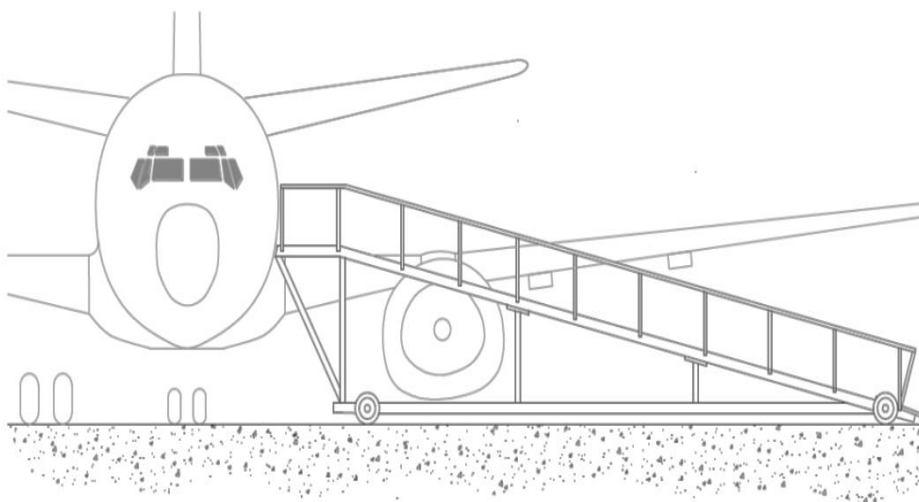
- Transition ramp handrails should extend 12 in. (31 cm) beyond the top and bottom of the transition ramps to provide a stable gripping surface before one is on the ramp. 2010 ADAAS 505.10.
- The transition between telescoping sections is a particular hazard to persons with mobility impairments and must be made as easy to negotiate as possible.



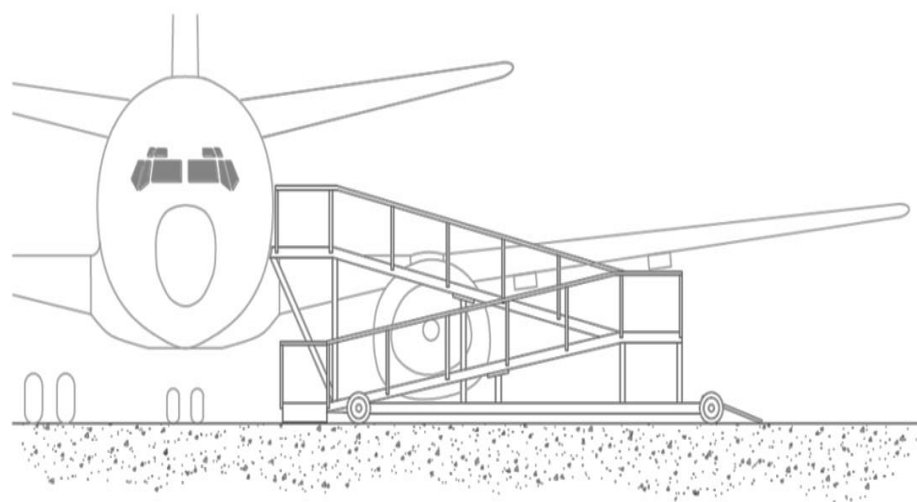
Portable Ramp Requirements

Types of Ramps

- Portable devices used on airport apron that provide continuous sloped surfaces.
 - Usable by wheelchairs and boarding chairs.
 - Allow all passengers to board in the same manner.
- Straight Ramps: provide straight-line path, from ground to aircraft door.
- Switchback Ramps: provide path with switchbacks / landings, from ground to aircraft door.



Straight Ramp



Switchback Ramp

Portable Ramp Requirements continued

Transition Areas

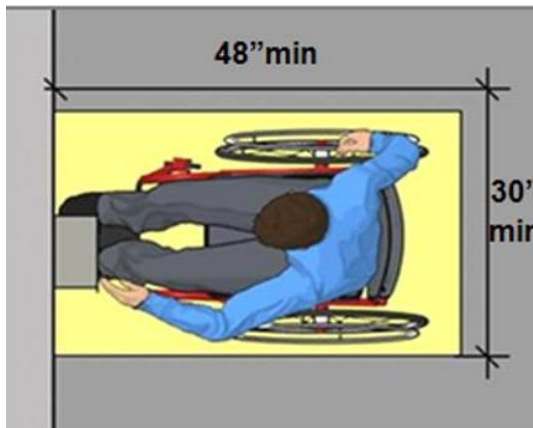
- The portable (or secondary) ramp that bridges the gap between the boarding equipment and the aircraft must be designed so as not to damage the aircraft or dislodge when in use. It may rest on the doorsill but must not induce unsafe loads on the aircraft.
- Maximum angle for transition ramps is a slope no greater than 1:8.
- "CAUTION" must be displayed on the floor of the transition area, using a conspicuous color scheme (e.g., yellow on black or black on yellow), with the word spanning the width of the smaller transition area, on both ends of the transition.



Lift Requirements

Lifts

- Must meet requirements of 49 CFR § 38.23(b)(5-11):
 - Platform design elements: edge barriers, flat and slip resistant surface, no gaps, level,
 - Movement: 6 in. / sec. maximum speed; 0.3 g. maximum acceleration, and
 - Boarding direction: riders can choose inboard or outboard facing.
- Platform size: at minimum, clear floor space for a single stationary wheelchair (30 in. wide by 48 in. long).



Contacts



Airport Disability Compliance Program

2300 E. Devon Avenue, Suite 440

Des Plaines, IL 60018

Phone: (847) 294-7209

Email: 9-AGL-ADA-504@faa.gov

Jonathan Klein (Jonathan.Klein@faa.gov)

Team Lead, Specialist for Alaskan and Western-Pacific regions

Elisha Luyeho (Elisha.Luyeho@faa.gov)

Specialist for Southwest and Southern regions

Sophia Soler (Sophia.Soler@faa.gov)

Specialist for New England and Eastern regions

Ty Thomas (Tyrone.Thomas@faa.gov)

Specialist for Great Lakes, Central, and Northwest Mountain regions

Contacts continued

FAA Airports Organization

http://www.faa.gov/airports/news_information/contact_info/regional/

FAA Airport Engineering Division (AAS-100)

https://www.faa.gov/about/office_org/headquarters_offices/arp/offices/aas/aas100/

800 Independence Avenue SW
Washington DC 20591

Phone: (202) 267-7669 / Fax: (202) 267-3688

Questions



Thank You!

